

304-375

Work Order ID 90786

90786

Page 1

September-25-12 1:56:11 PM

Item ID: D3759-1

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Bushing

Start Date: 25/09/2012 Start Qty: 200.00

200

Cust Item ID:

Required Date: 09/10/2012 Req'd Qty: 200.00

200

Customer:

Reference:

Approvals: Process Plan: ML5 Date: 12-09-25 Tooling:

Run Start *NR1*

QC: Date: SPC (Y/N):

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3759

Rev A

100

0.00

100

Hardinge CNC LATHE SMALL

Hardinge

Memo

0.00

Hardinge CNC Lathe Small

Hardinge CNC LATHE SMALL
Turn per Folio FA727 and Dwg D3759

DO NOT Deburr ENDS

SL 12/10/14

210 ϕ

110

0.00

110

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

SL 12/10/14

210 ϕ

120

0.00

120

QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

DAS 14 12/10/15

210 ϕ

Work Order ID 90786

September-25-12 1:56:11 PM

90786

Page 2

Item ID: D3759-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Bushing

Stop ***NS2***

Start Date: 25/09/2012 Start Qty: 200.00

200

Cust Item ID:

Required Date: 09/10/2012 Req'd Qty: 200.00

200

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Identify as per dwg & Stock Location:

0.00

130

Packaging

Memo

0.00

Packaging

*****STOCK IN BASKET CELL*****

~~210x~~ ~~12-10-17~~

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

12/10/18

12-10-17

Picklist Print

September-25-12 1:56:14 PM

Page 1

Work Order ID: 90786

90786

Parent Item: D3759-1

D3759-1

Parent Item Name: Bushing

Start Date: 25/09/2012

Required Date: 09/10/2012

Start Qty: 200.00

Required Qty: 200.00

Comments: IPP Rev:A 08-03-04 new issue DD verified by: LL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304R0.375		Purchased	No			110	f	32.5080	0.0725	15.26316			
M304R0 375									**	SD 12/10/14			
304 ROUND BAR 0.375													

Location

MAT029

119346

120204

121380

122831

Loc Qty

32.508

1.564

2.721

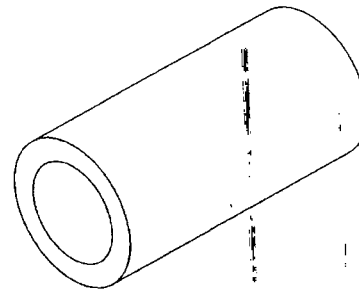
4.807

23.416

Loc Code

15.2 R 4

10 R 4



D3759-1 BUSHING

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER
NO. 90786 MLJ
12-09-25

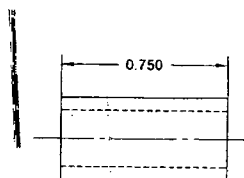
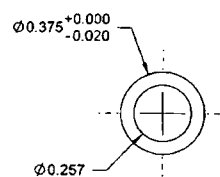
RELEASED

NOTES:

- 1) MATERIAL: AISI 304/316, STAINLESS STEEL ROD
(REF. DART SPEC M304R)
OR AISI 304/316, STAINLESS STEEL TUBE
(REF. DART SPEC M304TR)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.01 lbs

A	NEW ISSUE	AJS	08.03.03
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS	DRAWING NO.	REV. A
CHECKED	ME	D3759	SHEET 1 OF 2
MFG. APPR.	ME	TITLE	SCALE
APPROVED	ME	BUSHING	NTS
DE APPR.	ME	DATE 08.03.03	
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0786



D3759-1 BUSHING

RECEIVED
11-03-03

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D3759	SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	BUSHING	NTS
DATE	08.03.03	<small>COPYRIGHT © 2003 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

Receiving Report

Date: 12/8/27 Batch No: M12283
 Supplier: MEGA-X CASTLE Dart P/O: 17688

Packing Slip: Yes ☒ No ☐
 Invoice: Yes ☒ No ☐
 Receipt: Cash ☐ Cr ☒
 Release Note Attached: Yes ☒ No ☐ N/A ☐
 Waybill Attached: Yes ☐ No ☒
 Shipment Complete: Yes ☐ No ☒ N/A ☐
 QC6 Inspection: OK 12/09/12 N/A ☐
 Work Order: _____ N/A ☒

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments
M4130R5-048		36	0	0	36	

Initials of receiver (if shipment OK) Level 12 [Signature]

Production/Admin: 12/8/27
 Date
 Received/Costing
 Initial [Signature]

Location _____

All amounts are calculated in domestic currency.

Grouped by Vendor ID

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
VendorID/Vendor Name		VC-MET001	Metaux Castle								
PO17698	1		M174B1.250X02.000 f		8/29/2012	8/27/2012	24.6667	\$46.72	0.0000	0	\$1,152.45
CAD	No		17-4 SS Bar 1.250 x f 2.00 122831		24.0000	DESJ02		\$1,152.45	0.0000	0	
	2		M174R0.750 f		8/29/2012	8/27/2012	24.0000	\$5.70	0.0000	0	\$136.68
	No		17-4 Round bar .750 f 122831		24.0000	DESJ02		\$136.68	0.0000	0	
	3		M304R0.375 f		8/29/2012	8/27/2012	48.0000	\$1.40	0.0000	0	\$67.25
	No		304 ROUND BAR f 0.375 122831		48.0000	DESJ02		\$67.25	0.0000	0	
Total Received Quantity:											96.6667
Total Qty to Inspect (PO U/M):											0.0000
Total Reject Quantity:											0.0000
Total Receipt Value:											\$1,356.39
Total Balance Due Quantity:											0.0000

**Castle Metals®**

A. M. Castle & Co.

**PACKING SLIP/
CERTIFICATE OF CONFORMANCE**

Page 1 of 1

Shipment No:1442322

Ship From: A. M. Castle & Co. (Canada) Inc. MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 24-AUG-2012	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 1442322-2	

Shipment Details	Final Destination Branch - MON
-------------------------	---------------------------------------

Order No 2374031	Line No 3	Item No 15043	Description 0.3750.RD.304/304L.STAINLESS.CF.ANN.132.0000-156.0000 SPECIFICATIONS: ASTM A276				
Purchase Order No 17698		Part Number		Ordered Qty 48.00 FT		Invoice Qty 48.0000 FT	
Details							
Delivery No. 117896135	Mill NORTH AMERICAN STAINLESS	Heat Number B3B1	Mech Id	PCS 4	Width (IN)	Length (IN) 144.0000	Shipped Qty(LBS) 18.0480

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date: Name:

Castle Metals FP

HEAT NUMBER B381
MECHANICAL ID _____
ITEM CODE 15043
LOT NUMBER _____
PO NUMBER 145984
RECEIPT DATE 2-10-12
SUPPLIER NAS
SPECIFICATION _____
LCS NO
COMMENT _____
APPROVED DJ





**NORTH AMERICAN
STAINLESS**

METALLURGICAL TEST REPORT

6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 709423 17

Mail To:

A.M. CASTLE AND COMPANY
1420 KENSINGTON ROAD-SUITE 220
OAK BROOK IL 60523

Ship To:

A.M. CASTLE AND COMPANY
3400 NORTH WOLF ROAD
FRANKLIN PARK IL 60131

Date: 2/07/2012 Page: 1 of 1

Steel: 304/304L

Finish: Cold Draw

Dia/Thk: .3750 in

Leg Length:

Length: 144.00 in

Corrosion: ASTM A262 Prac A/E OK

Customer: 0032 001

NAS Order: LN 79853 3

Your Order: 145984

Item Code: 15043

PRODUCT DESCRIPTION:

ASTM A193/10a-ASME SA193/10 CL 1 GR B8 (EXC PAR 7.2)

GRAIN SIZE= 4-6

Round Bar, Annealed, Cold Draw

UNS 30400/30403 EN 10204 3.1, ASTM A484/10

ASTM A276/10, ASTM A479/10a, ASTM A182/10 CHEM ONLY,

ASME SA479/10a, ASME SA182/10 CHEM ONLY

AMS 5639H, AMS 5647J, AMS QQS-763B, QQS-763F

REMARKS:

COMPLIES W/REQUIREMENTS OF DFARS EU DIRECTIVE 2002.95.

EC. RoHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG IN USA

FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight
BE36080	1706								

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)

Heat	Supplier #	CM	C	CO	CR	CU	MN	MO	N	NI	P	S
B3B1		US	.018	.13	18.22	.35	1.34	.26	.056	8.62	.030	.0280
		SI										
		.31										

MECHANICAL PROPERTIES

	I d	HB	.2YS	UTS	RA	Elong
	o i	No.	KSI	KSI	%	% 2"
	c r					
BE36080	R L	208.0	92.29	112.25	69.12	41.00

NAS hereby certifies that the analysis on this certification is correct and the material meets the specifications stated.

Technical Dept. Mgr.

ERIC HESS

12/09/12



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO17698

Purchase Order Date 8/16/12

PO Print Date 8/16/12

Page Number 1 of 2

Order From : VC-MET001
METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100
TORONTO, ON M4Y 3A5
CA

Contact Name

Vendor Phone

514 694 9575

Vendor Fax

514 695 3281

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAKED
EXP 10/12

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M174B1.250X02.000 030	17-4 SS Bar 1.250 x 2.000	8/29/12 Yes	24.00 f 24.6667	Yours ppd	\$46.3500	\$1,112.40
Special Inst: MATERIAL: 17-4 PH SS BAR AS PER AMS 5604/5643 GRAIN MUST BE ALONG LENGTH OF BAR MINIMUM YIELD TENSILE STRENGTH = 100 KSI MINIMUM ULTIMATE TENSILE STRENGTH = 150 KSI							
2	M174R0.750 030	17-4 round bar .750	8/29/12 Yes	24.00 f	Yours ppd	\$5.6500	\$135.60
Special Inst: MATERIAL: 17-4 PH/S17400 TYPE 630 SS ROUND BAR AS PER AMS 5643 OR ASTM A564							
3	M304R0.375 029	304 ROUND BAR 0.375	8/29/12 Yes	48.00 f	Yours ppd	\$1.3900	\$66.72

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required **YES** NO

Change Nbr: 1

Change Date: 8/16/12



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO17698

Purchase Order Date 8/16/12

PO Print Date 8/16/12

Page Number 2 of 2

Order From : VC-MET001
METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100
TORONTO, ON M4Y 3A5
CA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	514 694 9575	Requisition Nbr	
Vendor Fax	514 695 3281	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Special Inst: MATERIAL: MATERIAL: 304/316 SS
ROUND BAR
AS PER ASTM A276
NOTE: AISI 303 NOT ACCEPTABLE

4	M4130NS.049	4130 Sheet .049	8/29/12	36.00	Yours:ppd	\$8.7500	\$315.00
			Yes	sf			

12-08-21
Q1 012

Special Inst: MATERIAL: AISI 4130N STEEL SHEET
AS PER
MIL-S-18729 OR AMS 6350 OR AMS 6351

PO Total: \$1,629.72

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

Change Nbr: 1

Change Date: 8/16/12

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required - YES NO